FCC 47 CFR PART 15.225

TEST REPORT

For

Yedi Zen Lock

Model No.: YZL001

Trade Name: YEDI

Issued to

Yedi Technologies Inc.
329 11th St NE, Washington, District of Columbia, 20002, USA

Issued by

Compliance Certification Services Inc.
Wugu Laboratory
No.11, Wugong 6th Rd., Wugu Dist.,
New Taipei City, Taiwan.
Issued Date: September 04, 2025

Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	August 11, 2025	Initial Issue	ALL	Allison Chen
01	August 28, 2025	See the following Note Rev.(01)	P.4-7, 9, 12-13	Allison Chen
02	September 04, 2025	See the following Note Rev.(02)	P.7	Allison Chen

Note:
Rev.(01)
1. Modify ANSI version, measurement equipment and test setup photo.
2. Modify antenna specification in section 2, description of test mode in section 3.3 and test procedure in section 7.1.

Rev.(02)
1. Modify description of test mode in section 3.3.

TABLE OF CONTENTS

1. TEST RESULT CERTIFICATION

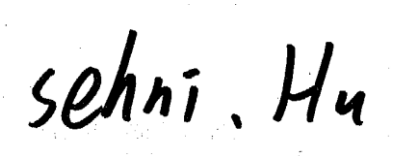
Applicant:	Yedi Technologies Inc. 329 11th St NE, Washington, District of Columbia, 20002, USA
Manufacturer:	Yedi Technologies Inc. 329 11th St NE, Washington, District of Columbia, 20002, USA
Equipment Under Test:	Yedi Zen Lock
Trade Name:	YEDI
Model No.:	YZL001
Date of Test:	July 01~02, 2025

APPLICABLE STANDARDS	
STANDARD	**TEST RESULT**
FCC 47 CFR Part 15.225	Compliance
Statements of Conformity	
Determination of compliance is based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.	

We hereby certify that:

The above equipment was tested by Compliance Certification Services Inc. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10: 2020 and the energy emitted by the sample tested as described in this report is in compliance with the requirements of FCC Rules Part 15.225.
The test results of this report relate only to the tested sample identified in this report.

Approved by:



Sehni Hu
Supervisor

2. EUT DESCRIPTION

Product	Yedi Zen Lock
Trade	YEDI
Model No.	YZL001
Model Discrepancy	N/A
Received Date	June 11, 2025
Power Supply	Power from Battery. (DC 3.7V, 18650*3)
Frequency Range	13.56MHz
Modulation Technique	ASK
Number of Channels	1 Channel
Antenna Specification	Model: NFC ANTENNA Type: PCB Loop Antenna
EUT Serial #	YZL001-2505-00054
HW Version	REV:3
SW Version	2.9.1

Remark:
1. For more details, refer to the User's manual of the EUT.
2. Disclaimer: Antenna information is provided by the applicant, test results of this report are applicable to the sample EUT received.
3. Only radiated measurements are used to show compliance with FCC limits for fundamental and spurious emissions

3. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.10: 2020 and FCC CFR 47 Part 15.207, 15.209, 15.215, 15.225.

3.1 EUT CONFIGURATION

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

3.2 FCC PART 15.205 RESTRICTED BANDS OF OPERATIONS

(a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
[1]0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 -	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.52525	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	156.7 - 156.9	3260 - 3267	23.6 - 24.0
12.29 - 12.293	162.0125 - 167.17	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	167.72 - 173.2	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	240 - 285	3600 - 4400	([2])
13.36 - 13.41	322 - 335.4		

[1] Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.
[2] Above 38.6

(b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

3.3 DESCRIPTION OF TEST MODES

The EUT had been tested under engineering test mode condition and the EUT staying in continuous transmitting mode.

All modes and data rates were investigated and it was determined that ISO 14443A/B, ISO 18092 Type y and ISO 15693 reader and FeliCa™ reader.

The frequency 13.56 MHz.The default channel to test, where it is the only manipulative channel as this application supports.

All data rates were investigated. Therefore, all testing was performed in ISO14443A and 106 Kbps mode was considered worst-case.

3.3.1 The worst mode of measurement

Radiated Emission Measurement Below 1G	
Test Condition	**Radiated Emission Below 1G**
Power supply Mode	**Mode 1: EUT Power by Battery.**
Worst Mode	☒ **Mode 1** ☐ **Mode 2** ☐ **Mode 3** ☐ **Mode 4**

Remark:

1. The worst mode was record in this test report.
2. EUT pre-scanned in three axis ,X,Y, Z and two polarity, for radiated measurement. The worst case(Z-Plane) were recorded in this report

4. TEST SUMMARY

FCC Standard Sec.	Chapter	Test Item	Result
15.203	2	Antenna Requirement	Pass
15.215	7.1	Occupied Bandwidth (99%) and 20dB Bandwidth	Pass
15.225 (a,b,c,d) 15.209 15.205	7.2	Radiated Emissions	Pass
15.255 (e)	7.3	Frequency Stability	Pass
15.207	7.4	AC Power-line Conducted Emission	N/A

5. INSTRUMENT CALIBRATION

5.1 MEASURING INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

5.2 MEASUREMENT EQUIPMENT USED

Equipment Used for Emissions Measurement

Conducted_FCC/IC (All)					
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Date**	**Calibration Due**
Loop Antenna	COM-POWER	AL-130	121051	2025-02-18	2026-02-17
Constant Temperature Humidity Chamber	TERCHY	MHG-150LF	930619	2024-10-15	2025-10-14
Cable	Woken	WC12	CC003	2025-06-26	2026-06-25
PXA Signal Analyzer	Keysight	N9030B	MY62291089	2024-10-04	2025-10-03
Software	N/A				

966A_Radiated					
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Date**	**Calibration Due**
Signal Analyzer	KEYSIGHT	N9010A	MY52220817	2025-03-05	2026-03-04
Active Loop Antenna	SCHWARZBECK	FMZB 1513-60	1513-60-028	2024-12-11	2025-12-10
Thermo-Hygro Meter	WISEWIND	1206	D07	2024-11-26	2025-11-25
Bi-Log Antenna	Sunol Sciences	JB3	A030105	2024-07-12	2025-07-11
Preamplifier	EMEC	EM330	060609	2025-02-20	2026-02-19
Cable	Huber+Suhner	104PEA	20995+21000+182330	2024-08-07	2025-08-06
Turn Table	CCS	CC-T-1F	N/A	N.C.R	N.C.R
Controller	CCS	CC-C-1F	N/A	N.C.R	N.C.R
Antenna Tower	CCS	CC-A-1F	N/A	N.C.R	N.C.R
Power Supply	ABM	9603D	D011314	2024-09-23	2025-09-22
Site Validation	CCS	966A	N/A	2024-08-03	2025-08-02
Software	e3 V9-210616c				

Remark:
1. Each piece of equipment is scheduled for calibration once a year.
2. N.C.R. = No Calibration Request.

5.3 MEASUREMENT UNCERTAINTY

PARAMETER	UNCERTAINTY
AC Powerline Conducted Emission	± 2.21 dB
Channel Bandwidth	± 2.79 dB
Frequency Stability	± 2.74 dB
Radiated Emission_9kHz-30MHz	± 3.492 dB
Radiated Emission_30MHz-200MHz	± 3.683 dB
Radiated Emission_200MHz-1GHz	± 3.966 dB

Remark: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

5.4 FACILITIES AND TEST LOCATION

All measurement facilities used to collect the measurement data are located at No.11, Wugong 6th Rd., Wugu Dist., New Taipei City, Taiwan.
CAB identifier: TW1309

Test site	Test Engineer	Remark
AC Conduction Room	--	Not applicable, because EUT doesn't connect to AC Main Source direct.
Radiation	Ben Yang	-
RF Conducted	David Li	-

Remark: The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC pubic Access Link (PAL) database, FCC Registration No. :444940, the FCC Designation No.:TW1309

6. SETUP OF EQUIPMENT UNDER TEST

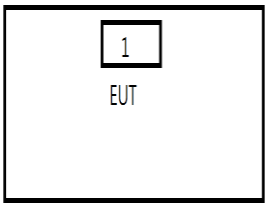
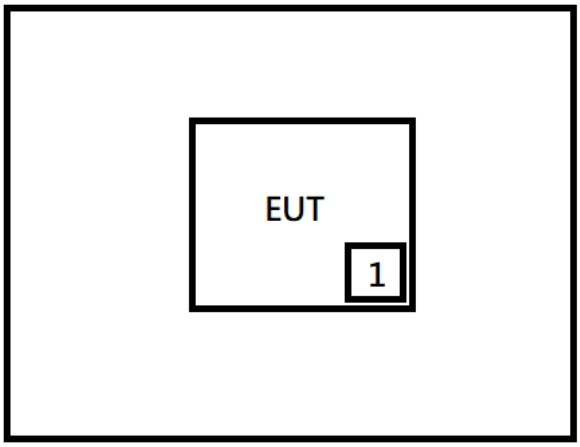
6.1 SUPPORT EQUIPMENT

EUT Accessories Equipment						
No.	**Equipment**	**Brand**	**Model**	**Series No.**	**FCC ID**	**IC**
	N/A					

Support Equipment (Conducted)					
No.	**Equipment**	**Brand**	**Model**	**Series No.**	**FCC ID**
1	NFC Card	Winso	N/A	N/A	N/A

Support Equipment (RSE)					
No.	**Equipment**	**Brand**	**Model**	**Series No.**	**FCC ID**
1	NFC Card	Nexwise	NTAG213	N/A	N/A

6.2 SETUP CONFIGURATION OF EUT

Conducted	RSE
	

6.3 TEST PROGRAM

This EUT placing the card in the sensing area to set the frequency, modulation and power to allow continuous transmission of the sample.

7. FCC PART 15.225 REQUIREMENTS

7.1 OCCUPIED BANDWIDTH(99%) AND 20 DB BANDWIDTH

TEST CONFIGURATION

Refer to section 6.2.

TEST PROCEDURE

1. Place the EUT on the table and set it in the transmitting mode.
2. Set the spectrum analyzer as RBW & VBW (RBW) shall be in the range of 1% to 5% of the actual occupied / x dB bandwidth (VBW) shall not be smaller than three times the RBW value.
3. Record bandwidth-related parameters.

TEST RESULTS

Compliance

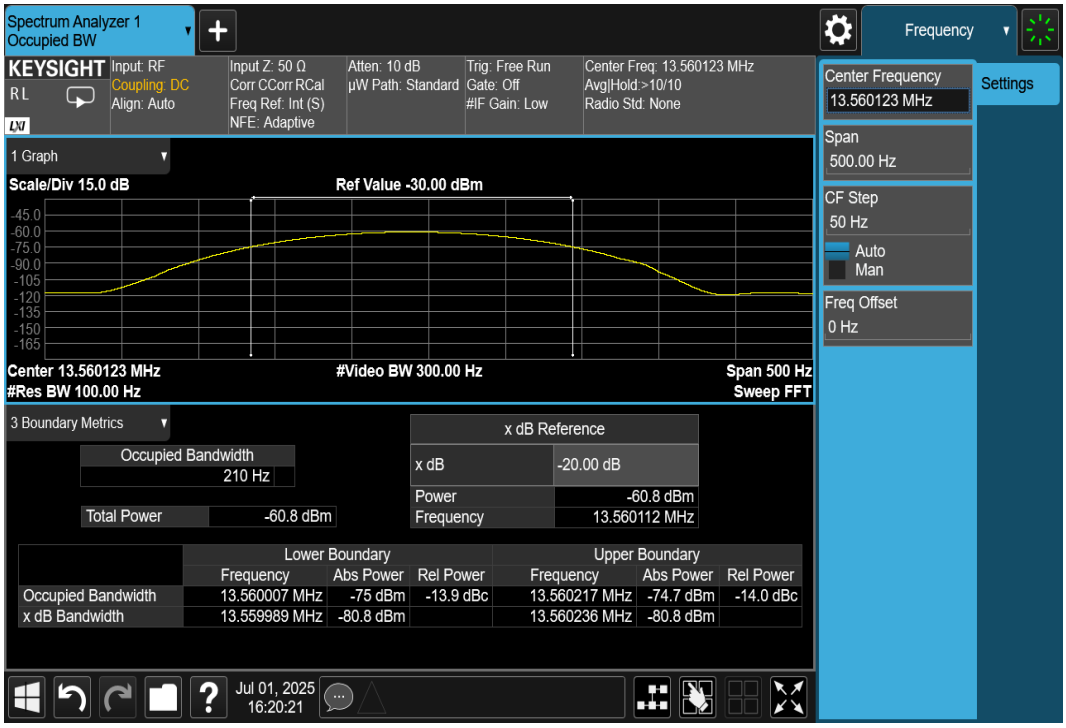
Temperature: 22.6℃ **Test Date:** July 01, 2025

Humidity: 55% RH **Tested by:** David Li

NFC					
Frequency (MHz)	**20dB BW (kHz)**	**Operation range**	**Frequency (MHz)**	**Limit (MHz)**	**99% BW (kHz)**
13.56	0.247	Low	13.559989	>13.11	0.21
		High	13.560236	<14.01	

Remark:
Because the measured signal adjusting the RBW per C63.10 would not be practical since measured bandwidth will always follow the RBW and the result will be approximately twice the RBW

Test Plot



7.2 FUNDAMENTAL AND RADIATED EMISSIONS

LIMIT

According to §15.225

(a) The field strength of any emissions within the band 13.553 – 13.567 MHz shall not exceed 15,848 microvolts / meter at 30 meters.
(b) Within the bands 13.410 – 13.553 MHz and 13.567 -13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts / meter at 30 meters.
(c) Within the bands 13.110 – 13.410 MHz and 13.710 – 14.010 MHz the field strength of any emissions shall not exceed 106 microvolts / meter at 30 meters.
(d) The field strength of any emissions appearing outside of the 13.110 – 14.010 MHz and shall not exceed the general radiated emission limits in §15.209.

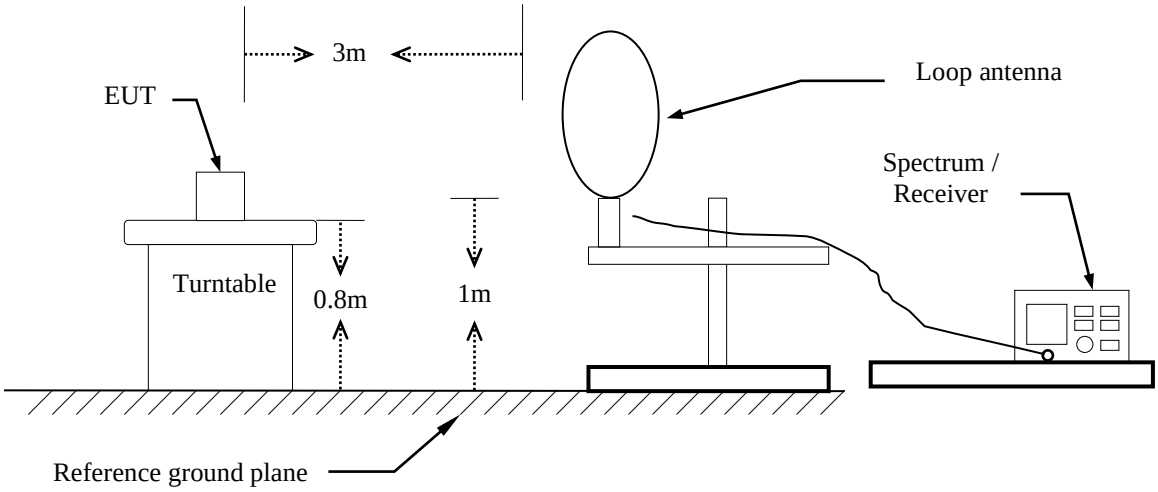
According to §15.225, except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (μV/m at meter)	Measurement Distance (meter)
0.009 – 0.490	2400 / F (kHz)	300
0.490 – 1.705	24000 / F (kHz)	30
1.705 – 30.0	30	30
30 - 88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

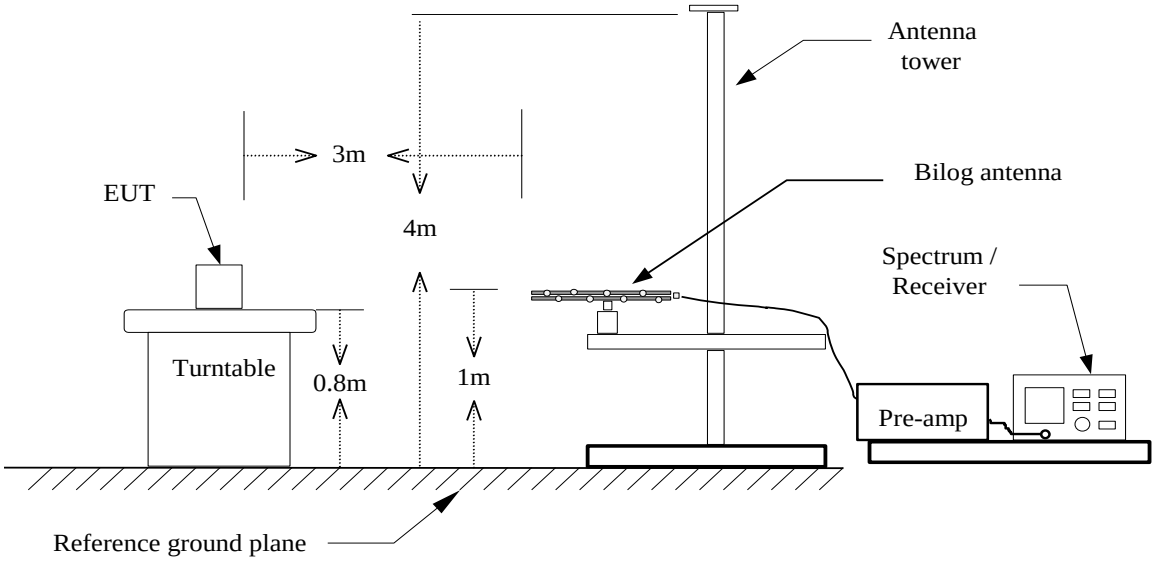
** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

Test Configuration

9kHz ~ 30MHz



30MHz ~ 1GHz



TEST PROCEDURE

For 9kHz ~ 30MHz

1. The EUT is placed on a turntable, which is 0.8m above ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, The lower edge of the loop shall be 1 m above the ground then to find out the highest emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. Set the spectrum analyzer in the following setting as:
   9KHz-490KHz : RBW=200Hz / VBW=1kHz / Sweep=AUTO
   490KHz-30MHz : RBW=10kHz / VBW=30kHz / Sweep=AUTO
6. Repeat above procedures until the measurements for all frequencies are complete.

For 30MHz ~ 1GHz

1. The EUT is placed on a turntable, which is 0.8m above ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to find out the highest emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving
   antenna both horizontal and vertical.
6. Set the spectrum analyzer in the following setting as:
   RBW=100kHz / VBW=300kHz / Sweep=AUTO
7. Repeat above procedures until the measurements for all frequencies are complete.

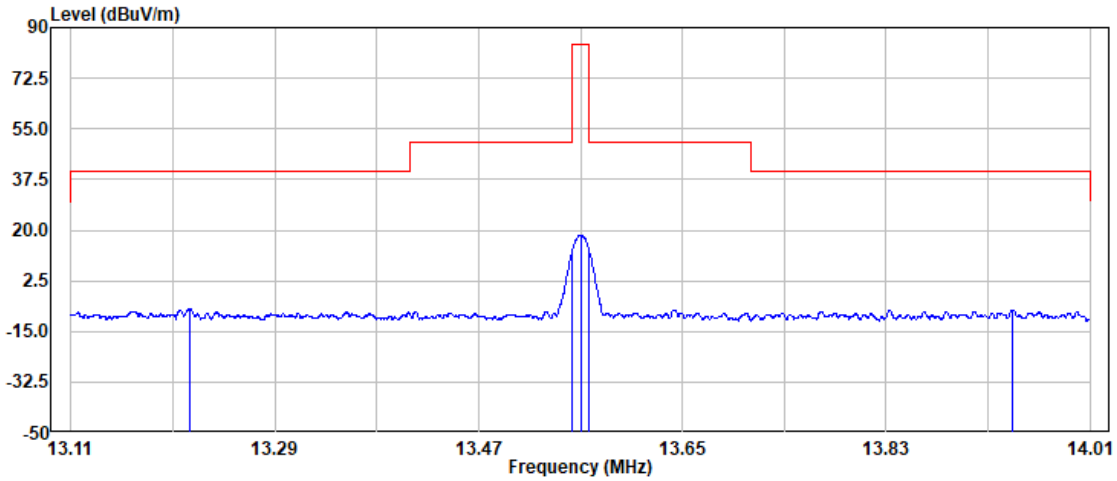
Remark :

1. Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30 m open are test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.

Test Data: Main

Project No : TM-2506000137P
Operation Band : NFC
Frequency : 13.56 MHz
Operation Mode : Main
EUT Pol : H
Setting :

Test Date : 2025-07-02
Temp./Humi. : 25.3/51
Antenna Pol. : HORIZONTAL
Engineer : Ben.Yang
Test Chamber : 966A

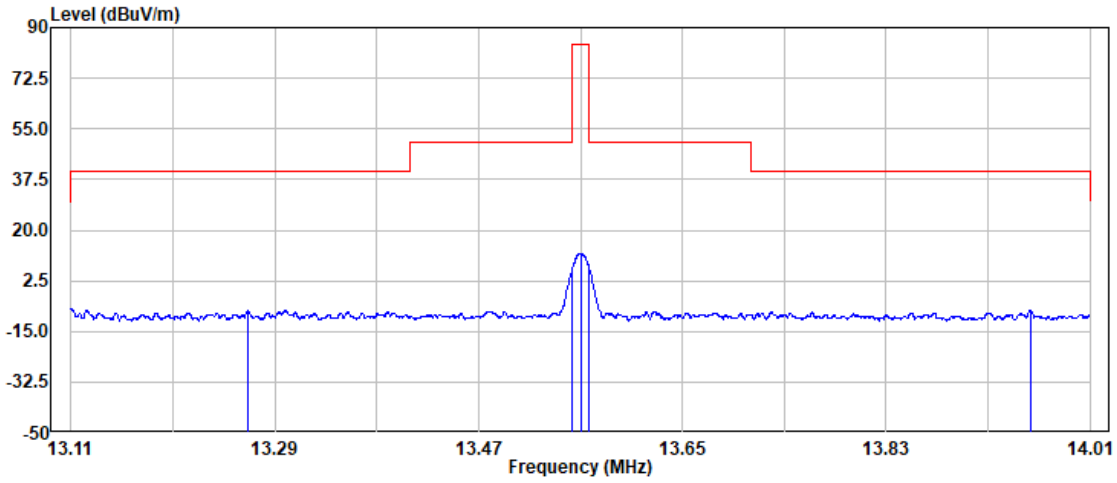


Freq	Read Level @3m	Factor @3m	Actual @3m	Factor @30m @300m	Actual @30m @300m	Limit	Margin	Detector Mode
MHz	dBuV	dB	dBuV/m	dB	dBuV/m	dBuV/m	dB	PK/QP/AV
13.22	16.64	16.10	32.74	-40.00	-7.26	40.51	-47.77	Peak
13.55	37.38	16.04	53.42	-40.00	13.42	50.47	-37.05	Peak
13.56	42.30	16.04	58.34	-40.00	18.34	84.00	-65.66	Peak
13.57	38.04	16.03	54.08	-40.00	14.08	50.47	-36.39	Peak
13.94	16.45	15.96	32.41	-40.00	-7.59	40.51	-48.10	Peak

Remark:

1. Radiated emissions measured were made with an instrument using peak/quasi-peak/average detector mode.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Margin (dB) = Result (dBuV/m) – Limit (dBuV/m).
4. Result=Read level+Factor@3m-Distance factor
5. Distance factor=40log(30m/3m)
6. Factor=antenna factor+cable loss

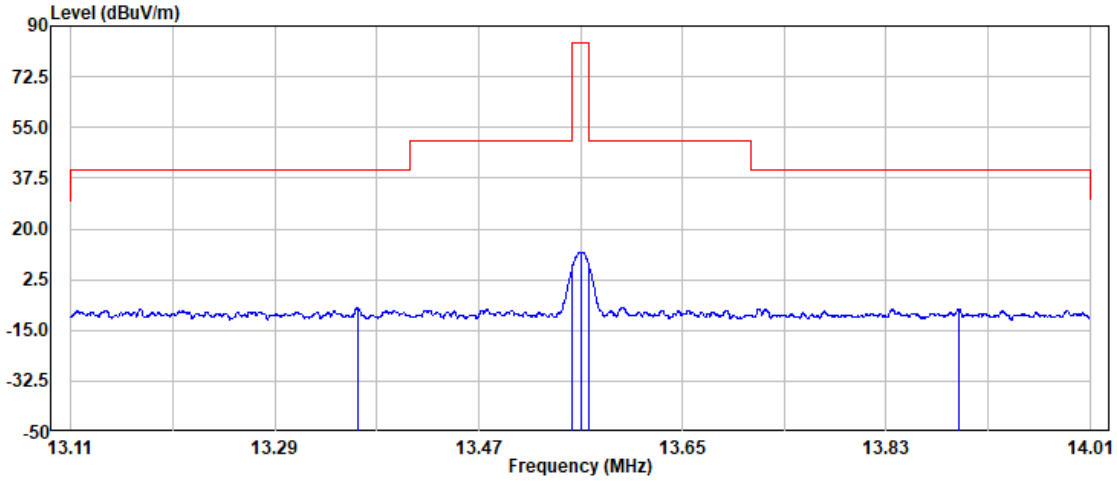
Project No	: TM-2506000137P	Test Date	: 2025-07-02
Operation Band	: NFC	Temp./Humi.	: 25.3/51
Frequency	: 13.56 MHz	Antenna Pol.	: VERTICAL
Operation Mode	: Main	Engineer	: Ben.Yang
EUT Pol	: H	Test Chamber	: 966A
Setting	:		



Freq	Read Level @3m	Factor @3m	Actual @3m	Factor @30m @300m	Actual @30m @300m	Limit	Margin	Detector Mode
MHz	dBuV	dB	dBuV/m	dB	dBuV/m	dBuV/m	dB	PK/QP/AV
13.27	16.08	16.09	32.17	-40.00	-7.83	40.51	-48.34	Peak
13.55	31.13	16.04	47.17	-40.00	7.17	50.47	-43.30	Peak
13.56	35.95	16.04	51.99	-40.00	11.99	84.00	-72.01	Peak
13.57	32.00	16.03	48.04	-40.00	8.04	50.47	-42.43	Peak
13.96	16.16	15.96	32.12	-40.00	-7.88	40.51	-48.39	Peak

Remark:
1. Radiated emissions measured were made with an instrument using peak/quasi-peak/average detector mode.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Margin (dB) = Result (dBuV/m) – Limit (dBuV/m).
4. Result=Read level+Factor@3m-Distance factor
5. Distance factor=40log(30m/3m)
6. Factor=antenna factor+cable loss

Project No	: TM-2506000137P	Test Date	: 2025-07-02
Operation Band	: NFC	Temp./Humi.	: 25.3/51
Frequency	: 13.56 MHz	Antenna Pol.	: GROUND
Operation Mode	: Main	Engineer	: Ben.Yang
EUT Pol	: H	Test Chamber	: 966A
Setting	:		

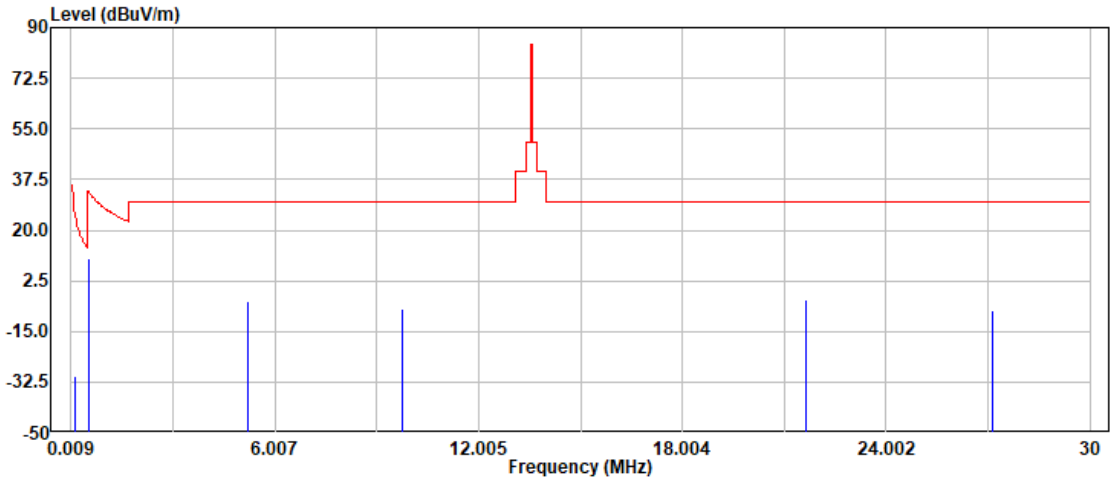


Freq	Read Level @3m	Factor @3m	Actual @3m	Factor @30m @300m	Actual @30m @300m	Limit	Margin	Detector Mode
MHz	dBuV	dB	dBuV/m	dB	dBuV/m	dBuV/m	dB	PK/QP/AV
13.36	16.65	16.07	32.73	-40.00	-7.27	40.51	-47.78	Peak
13.55	31.42	16.04	47.46	-40.00	7.46	50.47	-43.01	Peak
13.56	36.02	16.04	52.06	-40.00	12.06	84.00	-71.94	Peak
13.57	32.15	16.03	48.19	-40.00	8.19	50.47	-42.28	Peak
13.89	16.54	15.97	32.51	-40.00	-7.49	40.51	-48.00	Peak

Remark:
1. Radiated emissions measured were made with an instrument using peak/quasi-peak/average detector mode.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Margin (dB) = Result (dBuV/m) – Limit (dBuV/m).
4. Result=Read level+Factor@3m-Distance factor
5. Distance factor=40log(30m/3m)
6. Factor=antenna factor+cable loss

Test Data: 9kHz ~ 30MHz

Project No	: TM-2506000137P	Test Date	: 2025-07-02
Operation Band	: NFC	Temp./Humi.	: 25.3/51
Frequency	: 13.56 MHz	Antenna Pol.	: HORIZONTAL
Operation Mode	: TX	Engineer	: Ben.Yang
EUT Pol	: H	Test Chamber	: 966A
Setting	:		



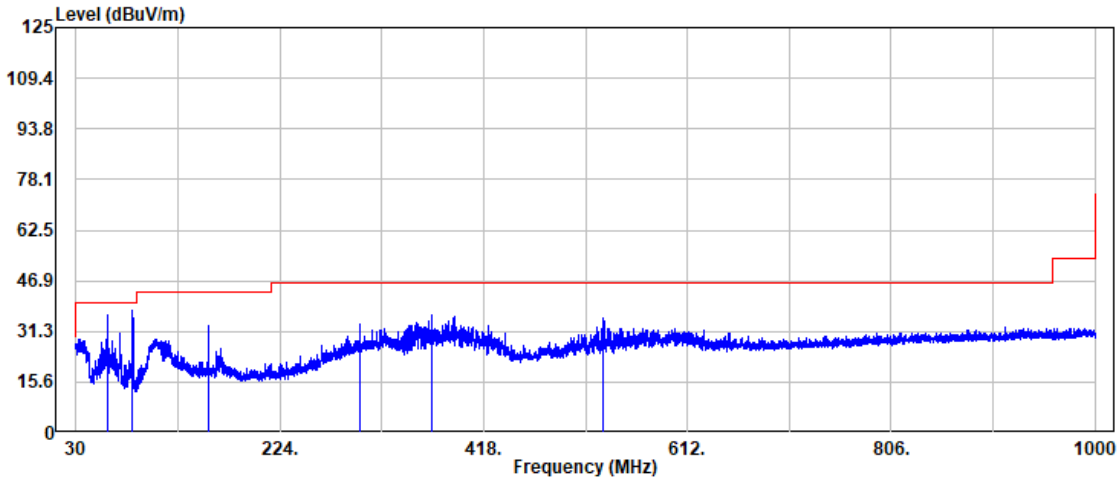
Freq	Read Level @3m	Factor @3m	Actual @3m	Factor @30m @300m	Actual @30m @300m	Limit	Margin	Detector Mode
MHz	dBuV	dB	dBuV/m	dB	dBuV/m	dBuV/m	dB	PK/QP/AV
0.14	36.51	13.29	49.80	-80.00	-30.20	24.98	-55.18	Peak
0.54	36.41	13.76	50.17	-40.00	10.17	32.99	-22.82	Peak
5.20	20.55	15.12	35.66	-40.00	-4.34	29.54	-33.88	Peak
9.76	16.93	15.94	32.87	-40.00	-7.13	29.54	-36.67	Peak
21.62	19.28	16.89	36.18	-40.00	-3.82	29.54	-33.36	Peak
27.12	14.26	18.24	32.50	-40.00	-7.50	29.54	-37.04	Peak

Remark:

1. 9kHz to 490kHz Limit(@3m) = 2400(F/kHz)
   490kHz to 1.705MHz Limit (@3m) = 2400(F/kHz)
   1.705MHz to 30MHz Limit (@3m) = 29.54
2. Distance factor=40log(300m/3m)@9-490kHz ; 40log(30m/3m)@490kHz-30MHz
3. Result=Read level+Factor@3m-Distance factor
4. After pre-scanning the main wave, only the worst polarization is evaluated and recorded in the report.

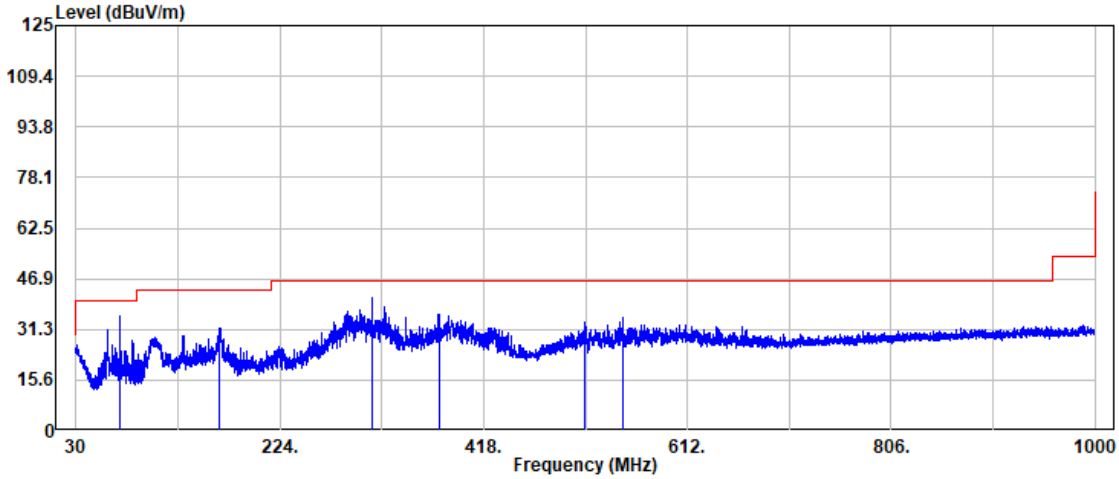
Test Data: 30MHz ~ 1GHz

Project No	: TM-2506000137P	Test Date	: 2025-07-02
Operation Band	: NFC	Temp./Humi.	: 25.3/51
Frequency	: 13.56 MHz	Antenna Pol.	: VERTICAL
Operation Mode	: TX	Engineer	: Ben.Yang
EUT Pol	: H	Test Chamber	: 966A
Setting	:		



Freq	Read Level	Factor	Actual FS	Limit @3m	Margin	Detector Mode
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	PK/QP/AV
59.95	52.15	-16.03	36.12	40.00	-3.88	Peak
84.08	54.42	-16.55	37.87	40.00	-2.13	Peak
156.22	44.07	-11.04	33.03	43.50	-10.47	Peak
300.39	42.80	-9.28	33.52	46.00	-12.48	Peak
369.02	43.99	-7.77	36.22	46.00	-9.78	Peak
531.85	39.50	-3.97	35.53	46.00	-10.47	Peak

Project No	: TM-2506000137P	Test Date	: 2025-07-02
Operation Band	: NFC	Temp./Humi.	: 25.3/51
Frequency	: 13.56 MHz	Antenna Pol.	: HORIZONTAL
Operation Mode	: TX	Engineer	: Ben.Yang
EUT Pol	: H	Test Chamber	: 966A
Setting	:		



Freq	Read Level	Factor	Actual FS	Limit @3m	Margin	Detector Mode
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	PK/QP/AV
72.07	50.96	-15.61	35.35	40.00	-4.65	Peak
166.89	43.10	-11.50	31.60	43.50	-11.90	Peak
312.27	49.94	-9.01	40.93	46.00	-5.07	Peak
375.32	43.43	-7.60	35.83	46.00	-10.17	Peak
513.67	37.77	-4.34	33.43	46.00	-12.57	Peak
550.28	38.71	-3.73	34.98	46.00	-11.02	Peak

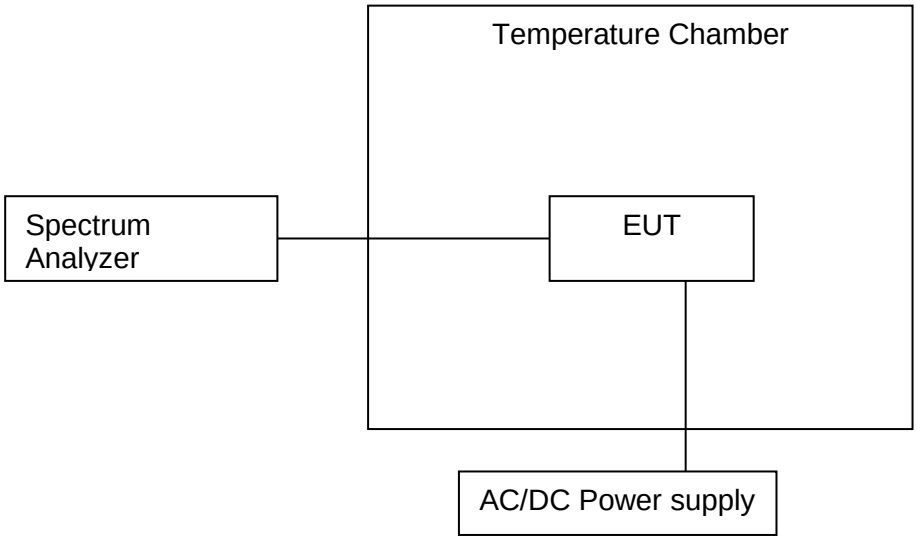
7.3 FREQUENCY STABILITY

LIMIT

According to §15.225(e),
The frequency tolerance of the carrier signal shall be maintained within +/- 0.01% of the operating frequency over a temperature variation of –20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

Test Configuration

Temperature and Voltage Measurement (under normal and extreme test conditions)



TEST PROCEDURE

1. Turn the EUT off, and place it inside the environmental temperature chamber.
2. Set the temperature control on the chamber to the highest specified in the regulatory requirements for the type of device and allow the oscillator heater and the chamber temperature to stabilize.
3. Set the spectrum analyzer as RBW=1kHz, VBW = RBW, Span = 200kHz, Sweep = auto.
4. Turn the EUT on and record the operating frequency at startup and two, five, and ten minutes after the EUT is energized.
5. Switch off the EUT and Lower the chamber temperature by not more than 10 °C and allow the temperature inside the chamber to stabilize.
6. Mark the peak frequency and measure the frequency tolerance using frequency counter function.
7. Repeat step 4 through step 6 down to the specified temperature.

TEST RESULTS

Compliance

Temperature: 22.6℃ **Test Date:** July 01, 2025

Humidity: 55% RH **Tested by:** David Li

TEST DATA

Startup				
A. Temperature Variation				
Power Supply	Environment	Frequency	Delta (kHz)	Limit (kHz)
Vdc	Temperature (℃)	(MHz)		
3.7	-20	13.560121	0.12100	+/- 1.356
3.7	-10	13.560106	0.10600	+/- 1.356
3.7	0	13.56011	0.11000	+/- 1.356
3.7	10	13.560108	0.10800	+/- 1.356
3.7	20	13.560112	0.11200	+/- 1.356
3.7	30	13.560117	0.11700	+/- 1.356
3.7	40	13.560108	0.10800	+/- 1.356
3.7	50	13.560106	0.10600	+/- 1.356
B. Supply Voltage Variation				
Power Supply	Environment	Frequency	Delta (kHz)	Limit (kHz)
Vdc	Temperature (℃)	(MHz)		
4.255	20	13.560115	0.11500	+/- 1.356
3.7	20	13.560112	0.11200	+/- 1.356
3.145	20	13.560122	0.12200	+/- 1.356

Note: Extreme temperatures are declared by the manufacturer

2 minutes				
A. Temperature Variation				
Power Supply	Environment	Frequency	Delta (kHz)	Limit (kHz)
Vdc	Temperature (℃)	(MHz)		
3.7	-20	13.56011	0.11000	+/- 1.356
3.7	-10	13.560122	0.12200	+/- 1.356
3.7	0	13.560104	0.10400	+/- 1.356
3.7	10	13.560106	0.10600	+/- 1.356
3.7	20	13.560119	0.11900	+/- 1.356
3.7	30	13.560116	0.11600	+/- 1.356
3.7	40	13.560115	0.11500	+/- 1.356
3.7	50	13.560118	0.11800	+/- 1.356
B. Supply Voltage Variation				
Power Supply	Environment	Frequency	Delta (kHz)	Limit (kHz)
Vdc	Temperature (℃)	(MHz)		
4.255	20	13.56011	0.11000	+/- 1.356
3.7	20	13.560119	0.11900	+/- 1.356
3.145	20	13.560115	0.11500	+/- 1.356

Note: Extreme temperatures are declared by the manufacturer

5 minutes				
A. Temperature Variation				
Power Supply	Environment	Frequency	Delta (kHz)	Limit (kHz)
Vdc	Temperature (℃)	(MHz)		
3.7	-20	13.560119	0.11900	+/- 1.356
3.7	-10	13.560123	0.12300	+/- 1.356
3.7	0	13.56011	0.11000	+/- 1.356
3.7	10	13.560121	0.12100	+/- 1.356
3.7	20	13.56012	0.12000	+/- 1.356
3.7	30	13.560122	0.12200	+/- 1.356
3.7	40	13.560117	0.11700	+/- 1.356
3.7	50	13.560106	0.10600	+/- 1.356
B. Supply Voltage Variation				
Power Supply	Environment	Frequency	Delta (kHz)	Limit (kHz)
Vdc	Temperature (℃)	(MHz)		
4.255	20	13.560107	0.10700	+/- 1.356
3.7	20	13.56012	0.12000	+/- 1.356
3.145	20	13.560114	0.11400	+/- 1.356

Note: Extreme temperatures are declared by the manufacturer

10 minutes				
A. Temperature Variation				
Power Supply	Environment	Frequency	Delta (kHz)	Limit (kHz)
Vdc	Temperature (℃)	(MHz)		
3.7	-20	13.560103	0.10300	+/- 1.356
3.7	-10	13.560105	0.10500	+/- 1.356
3.7	0	13.560113	0.11300	+/- 1.356
3.7	10	13.560104	0.10400	+/- 1.356
3.7	20	13.560122	0.12200	+/- 1.356
3.7	30	13.560108	0.10800	+/- 1.356
3.7	40	13.560104	0.10400	+/- 1.356
3.7	50	13.56012	0.12000	+/- 1.356
B. Supply Voltage Variation				
Power Supply	Environment	Frequency	Delta (kHz)	Limit (kHz)
Vdc	Temperature (℃)	(MHz)		
4.255	20	13.560118	0.11800	+/- 1.356
3.7	20	13.560122	0.12200	+/- 1.356
3.145	20	13.56012	0.12000	+/- 1.356

Note: Extreme temperatures are declared by the manufacturer

7.4 AC POWERLINE CONDUCTED EMISSIONS

LIMIT

According to §15.207(a) for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 µH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

Frequency Range (MHz)	Limits (dBµV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56*	56 to 46*
0.50 to 5	56	46
5 to 30	60	50

***** Decreases with the logarithm of the frequency.

TEST PROCEDURE

1. The EUT was placed on a table, which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured were complete.

TEST RESULTS

Not applicable, because EUT doesn't connect to AC Main Source direct.

- End of Test Report -